AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended): A pneumatic tire, comprising:

circumferential grooves disposed along a circumferential direction of a tread; and

land portions divided by the circumferential grooves, wherein positions of groove deepest portions in the circumferential grooves vary in a predetermined cycle along the circumferential direction in a width direction of the tread within the circumferential grooves,

wherein in the land portions, depth direction positions ~~from a tread surface~~, where a groove bottom surface of the circumferential groove contacts with each of perpendicular lines which are perpendicular or approximately perpendicular to the tread surface, which passes respectively through each of a plurality of edges on a side of each of the circumferential grooves, vary in a radial direction in the predetermined cycle along the circumferential direction;

angles, which are formed by the perpendicular lines and a section line of a cross-section of the groove bottom surface in the width direction of the tread surface with a vertex in the depth direction positions, vary in the predetermined cycle along the circumferential direction;

a cross sectional shape of the circumferential groove varies in a stepwise manner along the circumferential direction of the tread.

2. (original): The pneumatic tire of claim 1 characterized in that when a maximum groove cross-sectional area S is defined as an area of a rectangle formed by each of the edges of the land portions on the side of the circumferential groove and by points where the perpendicular lines, which are perpendicular or approximately perpendicular to the tread surface and which pass through the edges, intersect perpendicularly with a line which is parallel to the tread surface and tangent to the groove deepest portion, an effective groove cross-sectional area S' corresponding to a portion forming the circumferential groove along the entire circumferential direction satisfies $S' \geq 0.45S$ in the maximum groove cross-sectional area S.

3. (previously presented): The pneumatic tire of claim 1 characterized in that, when an angle close to a rotation center of the tire is denoted as $\alpha 1$ and an angle close to the tread surface is denoted as $\beta 1$, the angles being respectively formed, with a vertex in the depth direction position, by one of the perpendicular lines and the section line of the cross-section of the groove bottom surface in the width direction, at which the groove bottom surface contacts with the perpendicular line passing through the edge of the land portion disposed on the shoulder side of the tread, and when an angle close to the rotation center of the tire is denoted as $\alpha 2$ and an angle close to the tread surface is denoted as $\beta 2$, the angles being respectively formed, with a vertex in the depth direction position, by the other of the perpendicular line and the section line of the cross-section of the groove bottom surface in the width direction, at which the groove bottom surface contacts with the perpendicular line passing through an edge of a second land

portion which is the land portion disposed on a center side of the tread, a relationship $\alpha 2 < \beta 2$ is satisfied in a region where a relationship $\alpha 1 > \beta 1$ is satisfied, and a relationship $\alpha 2 > \beta 2$ is satisfied in a region where a relationship $\alpha 1 < \beta 1$ is satisfied.

4. (previously presented): The pneumatic tire of claim 2 characterized in that, when an angle close to a rotation center of the tire is denoted as $\alpha 1$ and an angle close to the tread surface is denoted as $\beta 1$, the angles being respectively formed, with a vertex in the depth direction position, by one of the perpendicular lines and the section line of the cross-section of the groove bottom surface in the width direction, at which the groove bottom surface contacts with the perpendicular line passing through the edge of the land portion disposed on the shoulder side of the tread, and when an angle close to the rotation center of the tire is denoted as $\alpha 2$ and an angle close to the tread surface is denoted as $\beta 2$, the angles being respectively formed, with a vertex in the depth direction position, by the other of the perpendicular line and the section line of the cross-section of the groove bottom surface in the width direction, at which the groove bottom surface contacts with the perpendicular line passing through an edge of a second land portion which is the land portion disposed on a center side of the tread, a relationship $\alpha 2 < \beta 2$ is satisfied in a region where a relationship $\alpha 1 > \beta 1$ is satisfied, and a relationship $\alpha 2 > \beta 2$ is satisfied in a region where a relationship $\alpha 1 < \beta 1$ is satisfied.

5. (previously presented): The pneumatic tire of claim 1, wherein the predetermined cycle along the circumferential direction is less than or equal to half of a contact length of the tread, wherein the contact length is a length where the tread contacts a ground.

6. (previously presented): The pneumatic tire of claim 1, wherein a shape of a cross section of each of the circumferential grooves is asymmetric along more than 70% of the circumferential direction.

7. (previously presented): The pneumatic tire of claim 1, further comprising inner grooves disposed along the circumferential direction of the tread at a radial position inside of the circumferential grooves.

8. (previously presented): The pneumatic tire of claim 1, wherein a top edge of the circumferential grooves is straight along the entire circumferential direction.

9. (previously presented): The pneumatic tire of claim 1, wherein the circumferential groove is formed linearly.